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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,917	08/29/2005	Markus Giggenbacher	62909(51994)	2949
21874 7590 01/31/2007 EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			EXAMINER PATEL, VISHAL A	
			ART UNIT	PAPER NUMBER
			3673	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/31/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/524,917

Applicant(s)

GIGGENBACHER ET AL.

Examiner

Vishal Patel

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/17/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 3-7 and 8-9, "the driver device is divided in at least a single radial plane...mounting ring for non-rotatable mounting to the rotating component" and "the retaining ring comprises sections in the form of segments of a circle", respectively, the limitation in line 3-7 claim that the entire driver device is in the form of segment of a circle. Unclear if applicant is intending to claim that only the retaining ring is in the form of segments of a circle because in claim 6 applicant claims that the mounting ring is in the form of segments of a circle. For examination purpose applicant is claiming that both the retaining ring and the mounting ring have the form of segments of a circle.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Copes (US. 3,025,070).

Copes discloses a divided driver device *for a mechanical face seal for non-rotatable assembly on a rotary component and for the transmission of a torque to a seal ring (2) held in non-rotatable manner* (intended use, the divided drive device of Copes is capable of doing this) on the driver device, in which the driver device (65 or member having 84 and member having

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24) is divided in at least a single radial plane for forming sections (figures 6-7) in the form of segments of a circle, the sections being adapted to be clamped together in the shape of a ring (figures 6-7), characterized in that the driver device (65 and member having 24) is axially subdivided into a divided retaining ring (the member having 24) for retaining the seal ring (31') and a divided mounting ring (mounting member 65) for non-rotatable mounting to the rotary component (12), the rings being coupled together for rotation in common, whereby the retaining ring (the member having 24) comprises sections in the form of segments of a circle adapted to be placed together in mutually sealed manner in the shape of a ring having an inner radial dimension that is greater than the nominal outer radial dimension of the rotary component (figures 6-7) and which comprise peripherally aligned end faces (end faces of the member having 24) abutting each another.

Regarding claim 2: The peripherally aligned end faces of the retaining ring are in essentially planar metal-to-metal contact and comprise a surface finish for mutually sealing them (figures 7).

Regarding claim 4: The retaining ring and the mounting ring are coupled together with play in at least the circumferential direction (figures 6-7).

Regarding claim 5: The mounting ring (65) is in the form of a clamping ring (clamping ring 65) for clamping engagement with the rotary component (12).

Regarding claim 6: The mounting ring comprises at least a pair of sections (figures 6-7) in the form of segments of a circle adapted to be built up to a ring shape having an inner radial dimension that is smaller than the inner radial dimension of the retaining ring.

Regarding claim 7: The seal ring (31) is loosely seated on the retaining ring.

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Regarding claims 8-9: A divided mechanical face seal (figures 6-7) having a divided driver device according to claims 1 and a seal housing (58) divided in at least one radial plane into sections in the form of segments of a circle which are clamped together and mutually sealed, wherein a seal ring (seal ring mounted near flange 71) is held non-rotatably on the housing (55) for cooperating with the seal ring (31) of the driver device. The sections of the seal housing comprise peripherally aligned end faces (end faces of 55), which are in essentially planar metal-to-metal contact and comprise a surface finish for mutually sealing (figures 6-7).

Furthermore the end faces have a surface finish.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Copes.

Copes discloses the claimed invention except that the end faces has a roughness of 0.5 micrometer. Discovering an optimum range of a result effective variable involves only routine skill in the art. In re Kulling, 895 F.2d 1147, 14 USPQ 2d 1056. Without the showing of some unexpected result. Since applicant has not shown some unexpected result the inclusion of this limitation is considered to be a matter of choice in design. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the end face of Copes to have roughness of 0.5 micro-meter to provide mechanical expedience and would be a matter of design choice.

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takahashi, Radosav et al and Carmody.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP
January 30, 2007



Vishal Patel
Patent Examiner
Tech. Center 3600